

## Abstract

According to the present disclosure, starch/polymer combinations are provided. The preferred starch/polymer combinations are usable as paper additives, in  
5 the wet end of a papermaking process. Typical and preferred starch/polymer combinations of this type, result from combining a starch, having a polymer reactive carbonyl functionality, with a polymer, having a carbonyl reactive functionality, under conditions that allow for covalent interaction between the two. Typically usable components comprise oxidized starch and polymer having reactive primary or reactive  
10 secondary amine groups. Also provided are methods of preparing such combinations, methods of use, preferred papers including such combinations, and, analytical techniques usable in preparation of such combinations.

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